

# Comments

## Tree Planters' Notes

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Articles in all sections except the "Practical Tips" are peer-reviewed by two outside, anonymous referees. Articles in the "Practical Tips" section are reviewed by a tech transfer specialist and a scientist on the advisory board.

**Cover:** Collecting pre-bagged cones of a known blister-rust-resistant sugar pine (*Pinus lambertiana* Dougl.) by spurless climbing on the Mt. Home Demonstration State Forest, California; other trees in the photograph are mature giant sequoia (*Sequoiadendron giganteum* (Lindl.) Buchholz (climber Carl Jackovich was photographed by Dean Bungart).

## Adapting JIT Principles to Nursery Production


Some say that 1996 was a record year for seedling production in the southern United States—a record shortfall. Seedling demand was so great that many nurseries were sold out by April. The exact reason for the increased demand is debatable. Some people placed their orders earlier in 1996 due to a shortfall of seedlings in 1995. Others believe the increased demand is due to higher levels of timber harvests (a result of higher stumpage prices). But whatever the reasons, it is a shame that in a country with such a high demand for wood fiber, so many acres will not be planted this year. Can we avoid similar shortages in the future? If we adopt "Just-In-Time"—JIT—principles, I believe we can at least reduce the magnitude of the shortfall.

What are these JIT principles? *They include rapid response to changes in markets or technology, the elimination of waste, striving for continued improvement, and employee involvement to make it all happen. Just-in-time requires that every phase of current processes be reexamined, rationalized, and simplified in order to respond quickly to customers' needs.*

Many nurseries in the southern United States continue to use outdated ordering systems. For example, some nurseries allow only large, industrial customers to place orders for seedlings before sowing; some do not allow private landowners to order seedlings before October 1. Some are using the same paper-driven system that was developed before the days of computers. In my opinion, the old systems should be reexamined and modified. Some nurseries are already making improvements. For example, in Alabama, a new system will allow all customers to order seedlings from the state nursery months or even years in advance.

Traditionally, nursery managers and state foresters have had to make their best guess at predicting seedling demand by non-industrial landowners, who use over 48% of the seedling crop. Many customers (even some who use forestry consultants) have become accustomed to showing up at the nursery in December or January and leaving with 50 bags of seedlings. If antiquated systems are kept in place, and if demand for seedlings continues to increase at an average rate of 25 million seedlings/year (since 1950), both overestimates and shortfalls will get larger in the future. What is needed is a better system that will take some of the guesswork out of predicting seedling demand. I believe adapting JIT principles would be a great improvement over the current system. For nursery use, the acronym for this system is JBS (for "Just-Before-Sowing").

The JBS system would reward and encourage customers to order seedlings at least 1 month before sowing. Customers ordering loblolly or slash pine may have a March 1 deadline. For bareroot longleaf pines, this may be a September 1 deadline (15 months before lifting). Customers who order before these deadlines are identified as JBS customers. Like passengers in first class, they get special perks. First, they get a discount on the price of seedlings. Second, their seedlings are identified on a map and are



given "reserved" status. Third, the appropriate seed source is sown for their planting area. "Regular" customers may order seedlings anytime after the deadline, but (1) they do not get a discount on price and (2) their seedlings are allocated only after the fall inventory check. When the fall inventory is short, regular customers run the risk of having their order downsized. At the time of placing the order, both regular and JBS customers pay a nonrefundable deposit (about 10%).

It will be unlikely that all nurseries will adopt this system for use in 1997. Some bean-counters may not see the advantages of this system and may oppose a change for the better. However, nurseries that use and print the new system on price lists may, over time, attract the lion's share of JBS customers. Organizations that do not adopt the JBS system may find that they are the ones who are left with the problem of predicting demand from regular customers.

The key to success of the JBS system is getting a greater number of individuals ordering seedlings before seed stratification. This year has demonstrated that many non-industrial landowners are willing to place orders early. In fact, the peak month for seedling orders was in May (December has traditionally been the peak month). If we can just move the peak date up 2 more months to March, future seedling shortages would be relatively minor in comparison. No doubt there will always be landowners who place orders after sowing because they do not know the system or do not use the advice of forestry consultants. However, if we go ahead and make the change-and inform consultants and regular customers of the advantages of ordering early-we can have a win-win situation in which both the JBS customer and the nursery benefit. Just as JIT principles have been particularly crucial to improving the efficiency of retail stores, JBS can improve the efficiency of forest tree nurseries.

[Views expressed here are my own, and I am not speaking on the behalf of others. - DBS]

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